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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/945,381	08/31/2001	Jason N. Farmer	60988-P001US-10103485	2127

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DALLAS OFFICE OF FULBRIGHT & JAWORSKI L.L.P.  
2200 ROSS AVENUE  
SUITE 2800  
DALLAS, TX 75201-2784

EXAMINER

MENEFEE, JAMES A

ART UNIT

PAPER NUMBER

2828

DATE MAILED: 06/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application N .

09/945,381

Applicant(s)

FARMER ET AL.

Examiner

James A. Menefee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM  
THE MAILING DATE OF THIS COMMUNICATION.

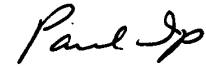
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.



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TECHNOLOGY CENTER 2800**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5. 6) ☐ Other:

**DETAILED ACTION*****Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-36 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 09/929,382. Although the conflicting claims are not identical, they are not patentably distinct from each other. The present claims are more specific embodiments of the device of claim '382, without the specification that the partial reflector is providing the feedback. As '382 claim 1 further includes all limitations not found in the claim due to the term comprising, then the invention of the present invention will be covered by any patent granted on '382 and would improperly extend the "right to exclude" granted on such a patent.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

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***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2, 4-6, 12-22, 26, and 29-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sanchez-Rubino (US 6,192,062). See especially Figs. 1-2 and discussion thereof.

Regarding claims 1 and 20, Sanchez-Rubino discloses a system for controlling output power comprising an external cavity providing feedback to an array of gain elements with said array of gain elements grouped into a plural number of gain blocks (see col. 5 lines 7-8), each gain block comprising one or more gain elements, and a multiplexing element being operable to combine output beams from said array of gain elements. There is not disclosed a means for applying variable current to gain blocks to vary output power of said gain elements by coupling an independent current source to each gain block. However, it is well known that an independent variable current source may be coupled to each of the gain elements. It would have been obvious to one skilled in the art to couple an independent variable current source to each of the gain elements so that the gain elements may be pumped independently, thus the proper amount of current is given to each gain element, as is well known.

Regarding claim 2, the gain elements each lase at a unique wavelength.

Regarding claims 4 and 26, it is inherent that the current source that will be pumping a laser will necessarily provide a current above the threshold for lasing, so that the laser may operate.

Regarding claim 5, the gain elements lase at unique wavelengths, thus it is inherent that a first block will necessarily emit light at a shorter wavelength than a second block.

Regarding claim 6, it is disclosed that the spacings between the gain elements may be different. While the spacings are not explicitly as claimed, such spacings would have been made by one skilled in the art by matter of engineering design choice. It would have been obvious to one skilled in the choose such spacings to help eliminate cross-talk between the gain elements.

Regarding claims 12-13, the type and material of the gain elements is to explicitly disclosed. However, these materials and types of laser are well known as types of laser in a laser array. It would have been obvious to one skilled in the art to choose these specific types and style of laser by matter of obvious engineering design choice.

Regarding claims 14, 22, and 29, it is not disclosed that there are means for modifying the polarizations of the output beams. However, it is well known that polarizations of beams may be modified. Certain systems, for example second harmonic generators, require that the polarizations of beams be in a certain way. Thus, it would have been obvious to one skilled in the art to modify the polarizations of the beams so that they may be used in such systems, as is well known.

Regarding claims 15-16, the multiplexing element 24 comprises a dispersive element, a reflective diffraction grating.

Regarding claim 17, Sanchez-Rubino does not disclose the specific multiplexing elements as claimed. However, such multiplexing elements are well known in the art. It would have been obvious to one skilled in the art to use these specific multiplexing elements rather than the multiplexing elements of Sanchez-Rubino by matter of obvious engineering design choice, as such elements will also provide the desired multiplexing without a significant change in the operation of the device.

Regarding claims 18-19, it is not disclosed that the laser system is multiplexed with another laser as claimed. However, it is well known to multiplex a number of laser systems together. It would have been obvious to one skilled in the art to multiplex the laser together with another laser as claimed so that the system may be used in systems that require multiplexed beams, for example communications systems, as is well known.

Regarding claim 21, see the rejections of claims 5-6 above.

Regarding claims 30-31, such specific means of modifying the polarizations is not disclosed. However, such polarization modifiers are well known. It would have been an obvious engineering design choice to use these specific means of modifying the polarization, given that modification was deemed obvious as shown above, as using these specific modifiers will not materially change the operation of the modifying, as is well known.

Claims 3, 7-11, 23-25, 27-28, and 32-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sanchez-Rubino in view of Kidorf et al. (previously cited IEEE Phot. Tech. Lett., May 1999). Sanchez-Rubino discloses the limitations of the claims as shown above.  
Further:

Regarding claim 3, Sanchez-Rubino does not disclose that the unique wavelengths are within 10 nm of each other. Kidorf teaches a similar laser array for pumping a Raman medium where the adjacent wavelengths are within 10 nm (Fig. 3). It would have been obvious to one skilled in the art to use these wavelengths as claimed for the gain elements as they provide a gain ripple of only 1.1 dB, as taught by Kidorf.

Regarding claims 7-11, 23-25, 27, and 35-36, Sanchez-Rubino does not disclose that the output beams are sent into a Raman amplifier having Raman gain at the wavelengths as claimed. Kidorf teaches a similar laser array for pumping a Raman gain medium, where the Raman gain is generated at the wavelengths as claimed (see Fig. 4). It would have been obvious to one skilled in the art to use the lasers for Raman amplification as they provide simple, low noise systems for use in WDM systems, as taught by Kidorf.

Regarding claims 28 and 33-34, see the rejection of claims 18-19 above.

Regarding claim 32, see the rejection of claims 4 and 26 above.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A. Menefee whose telephone number is (703) 605-4367. The examiner can normally be reached on M-F 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Ip can be reached on (703) 308-3098. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

JM  
June 23, 2003



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